



## Gulf of Mexico Harmful Algal Bloom Bulletin

Region: Texas

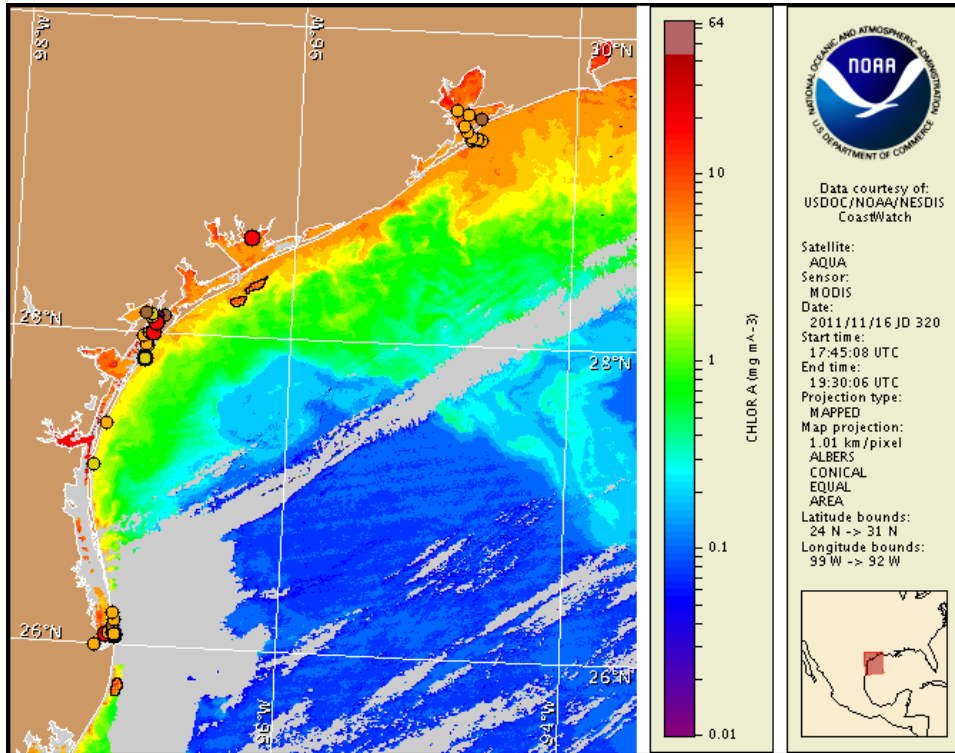
Thursday, 17 November 2011

NOAA Ocean Service

NOAA Satellite and Information Service

NOAA National Weather Service

Last bulletin: Tuesday, November 15, 2011



Satellite chlorophyll image with possible HAB areas shown by red polygon(s). Cell concentration sampling data from November 7 to 17 shown as red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/habfbs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/habfbs_bulletin_guide.pdf)

To see previous bulletins and forecasts for other Harmful Algal Bloom Bulletin regions, visit the NOAA Harmful Algal Bloom Operational Forecast System bulletin archive:  
<http://tidesandcurrents.noaa.gov/hab/bulletins.html>

## Conditions Report

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, alongshore the Matagorda Peninsula and within Matagorda Bay, in the Aransas Pass area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, within the lower Laguna Madre, and within the Brownsville Ship Channel area. Patchy high impacts are possible today through Sunday in the Matagorda and Port Aransas/Corpus Christi regions, alongshore South Padre Island, and within the lower Laguna Madre, today through Saturday along the Padre Island National Seashore and within the Brownsville Ship Channel, and today and Friday in the Galveston/Freeport area. Patchy moderate impacts are possible today through Sunday in the Galveston/Freeport region, and on Sunday along the Padre Island National Seashore and within the Brownsville Ship Channel. No additional impacts are expected at the coast in Texas today through Sunday, November 20. Respiratory irritation has been reported from the San Antonio Bay, Mustang Island State Park, and South Padre Island areas. Discolored water and dead fish have been reported from San Antonio Bay and Aransas Bay.

## Analysis

A harmful algal bloom is present along the Texas coast in the Galveston/Freeport area, alongshore the Matagorda Peninsula and within Matagorda Bay, in the Aransas Pass area and within Corpus Christi Bay, alongshore Padre Island National Seashore and the South Padre Island region, within the lower Laguna Madre, and within the Brownsville Ship Channel area.

No new samples have been received from the Galveston or Matagorda Bay regions. The most recent samples from these areas indicated *Karenia brevis* concentrations ranging between 'low a' and 'medium' concentrations in the Galveston region, while one recent sample from the Matagorda Bay indicated 'high' concentrations (11/7; TPWD). Discolored water, respiratory irritation, and dead fish have been reported from San Antonio Bay (11/15; TPWD).

In the Aransas/Corpus Christi Bay region, several samples collected within Aransas Bay indicate that *K. brevis* concentrations have increased at several sample locations (11/17; TPWD). Five samples indicate that 'medium' to 'high' concentrations continue to be found near the center of the bay and at Cove Harbor (11/14; TPWD). *K. brevis* increased to 'medium' concentrations at sample locations offshore Fulton and at Long Reef and increased to 'low a' at Lap Reef, within Copano Bay (11/14; TPWD). Samples collected from the Copano Bay Causeway and ICCW #49 indicate that concentrations have decreased to 'low b' (11/14; TPWD). Discolored water and dead fish have been reported throughout Aransas Bay (11/15; TPWD). Reports of intermittent respiratory irritation have been received from Mustang Island State Park (11/15; TPWD).

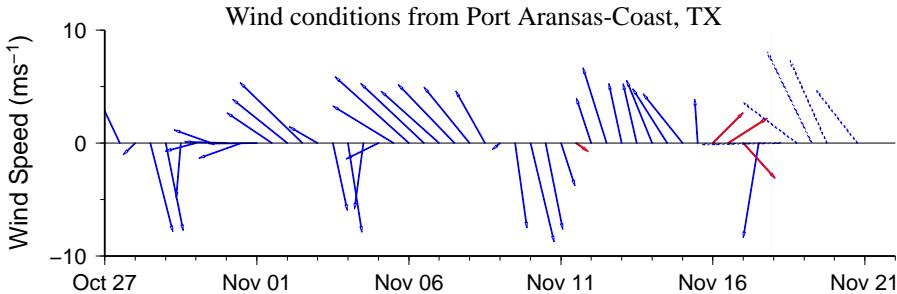
No new samples have been received from the Padre Island National Seashore and South Padre Island regions. The most recent samples indicated *K. brevis* concentrations ranging between 'low b' and 'medium' alongshore Padre Island National Seashore and at 'medium' concentrations alongshore South Padre Island, with 'low a' concentrations in the eastern portion of the lower Laguna Madre (11/7-11/10; TPWD). Reports of respiratory irritation have been received from Isla Blanca Park (11/15; TPWD).

Recent MODIS imagery from 11/16 (page 1) is partially obscured by clouds in the Padre Island National Seashore and South Padre Island regions. A band of elevated chlorophyll (2 to  $<10\mu\text{g/L}$ ) is visible stretching along- and offshore from Sabine Pass to south of the Rio Grande, with patches of elevated chlorophyll (4 to  $<10\mu\text{g/L}$ ) visible approximately 5 to 15 km offshore the Matagorda Island region, along the coast approximately 30 km north of the Port Mansfield region, and alongshore approximately 20 km south of the Rio Grande region. Elevated chlorophyll at the coast may contain *K. brevis* but could also be due to the continued resuspension of benthic chlorophyll and sediments, making it difficult to determine the extent of blooms from satellite imagery alone.

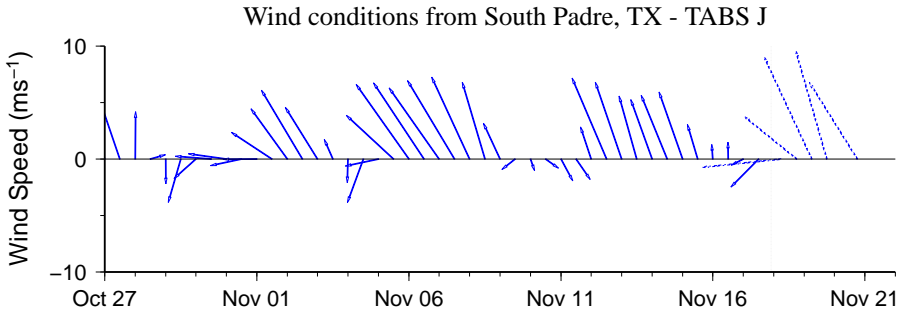
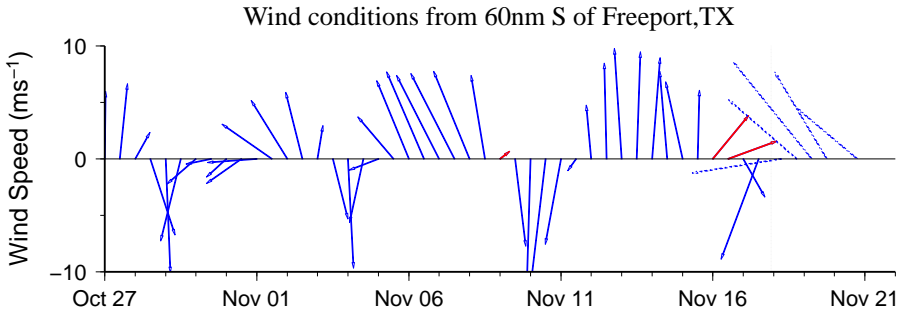
Forecast models indicate a maximum bloom transport from coastal sample locations of 60 km south from the Galveston Bay region, 50 km south from the Matagorda Peninsula region, 30 km south from the Port Aransas region, 15 km south along the Padre Island National Seashore, and  $<10$  km from Brazos Santiago Pass from November 15 to 20. Onshore winds over the next several days will increase the potential for impacts along the Texas coastline.

Kavanaugh, Derner

-2-



Wind speed and direction are averaged over 12 hours from buoy measurements. Length of line indicates speed; angle indicates direction. Red indicates that the wind direction favors upwelling near the coast. Values to the left of the dotted vertical line are measured values; values to the right are forecasts. Wind observation and forecast data provided by NOAA's National Weather Service (NWS).

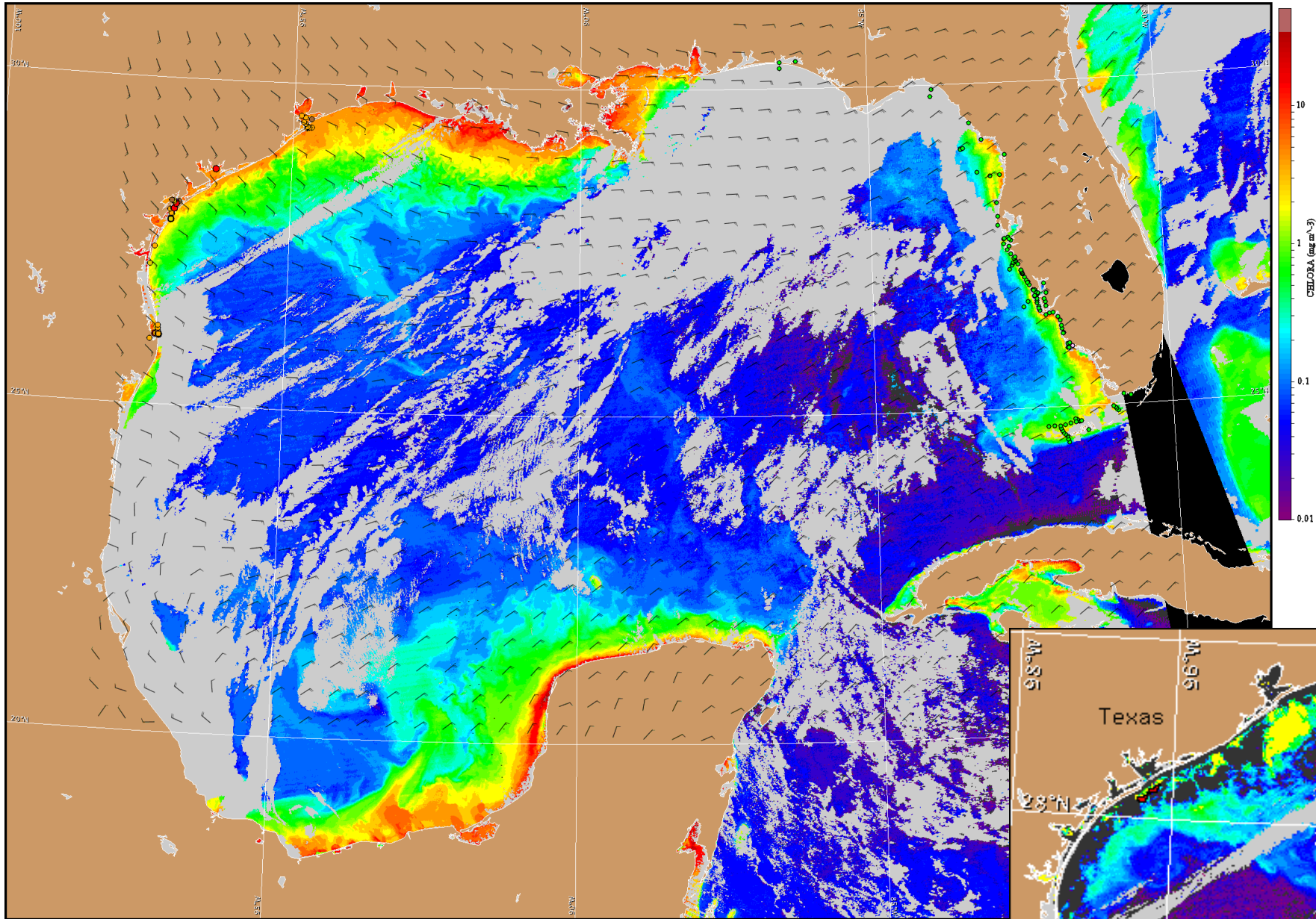


## Wind Analysis

**Galveston/Freeport:** Northeast winds (20-25kn, 10-13m/s) today becoming east winds (10-15kn, 5-8m/s) tonight through Friday. Southeast winds (10-20kn) Friday night through Sunday.

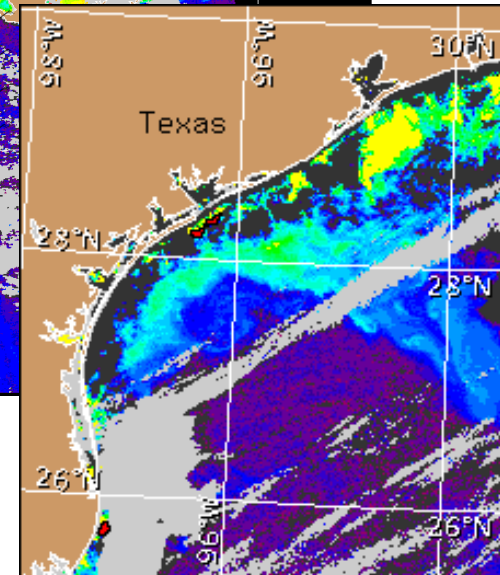
**Port Aransas:** East winds (10-20kn, 5-10m/s) today. Southeast winds (10-20kn) Friday through Sunday.

**South Padre:** Northeast winds (20-25kn) today becoming east (10-20kn) tonight. Southeast winds (10-20kn) Friday through Sunday.



Satellite chlorophyll image and forecast winds for November 18, 2011 18Z with cell concentration sampling data from November 7 to 17 shown as red (high), orange (medium), yellow (low b), brown (low a), blue (very low b), purple (very low a), pink (present), and green (not present). For a list of cell count data providers and a key to the cell concentration categories, please see the HAB-OFS bulletin guide:

[http://tidesandcurrents.noaa.gov/hab/habfs\\_bulletin\\_guide.pdf](http://tidesandcurrents.noaa.gov/hab/habfs_bulletin_guide.pdf)



Verified and suspected HAB areas shown in red. Other areas of high chlorophyll concentration shown in yellow (see p. 1 analysis for interpretation).